

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A shoe defining a normal walking direction and comprising a sole defining a heel region and a forward region, the forward region positioned beneath toes and at least part of a ball of a foot received within the shoe and having a lower surface exposed across the forward region to engage a supporting surface for walking thereon; and a roller secured to the sole, the roller disposed rearward of the forward region and extending below a lowermost extent of the heel region, the roller mounted to rotate about an axle defining a primary axis of rotation extending at an angle of between about zero and 45 degrees to the walking direction, as viewed from above the shoe, the axle secured to the sole through a compliant mount that allows tilting of the axle with respect to the sole to vary direction of travel while rolling upon the roller, the roller positioned so as to enable rolling sideways along a support surface as a mode of personal locomotion.

2. (original) The shoe of claim 1 wherein the roller is removable.

3. (original) The shoe of claim 1 wherein the roller is retractable.

4. (original) The shoe of claim 1 wherein the sole is flexible for bending during walking.

5. (original) The shoe of claim 1 wherein the roller forms a lowermost portion of the shoe.

6. (original) The shoe of claim 1 wherein the axle is mountable to the sole in a plurality of selectable axis orientations.

7. (original) The shoe of claim 6 wherein, in one of the axis orientations, the axle defines an alternate axis of rotation extending substantially perpendicular to the walking direction.

8. (original) The shoe of claim 1 wherein the shoe comprises two such rollers.

9. (original) The shoe of claim 8 wherein the two rollers are spaced apart laterally across the sole.

10. (original) The shoe of claim 9 wherein centers of the two rollers have a lateral spacing of about 20 percent of an overall length of the sole.

11. (original) The shoe of claim 8 wherein the two rollers are spaced apart along the walking direction.

12. (original) The shoe of claim 11 wherein midplanes of the two rollers are spaced apart along the walking direction by a distance of about 30 percent of an overall length of the sole.

13. (original) The shoe of claim 11 further comprising a grinding surface disposed between the rollers and defining a laterally extending channel for receiving a rail.

14. (original) The shoe of claim 13 wherein the grinding surface comprises a circumferential surface of a rolling member.

15. (original) The shoe of claim 13 wherein the grinding surface is rigidly secured to the sole of the shoe

16. (original) The shoe of claim 1 wherein the sole defines a cavity having an opening at the lower surface of the sole, the roller being partially disposed within the cavity and extending through the cavity opening.

17. (original) The shoe of claim 16 wherein the roller axle is mounted to a support cup spanning the roller and disposed within the sole cavity.

18. (original) The shoe of claim 17 wherein the support cup is removable from the sole cavity.

19. (original) The shoe of claim 17 wherein the support cup, roller and axle are removable from the sole cavity as a unit.

20. (original) The shoe of claim 17 wherein the support cup is selectively positionable in the cavity in a first position for rolling, in which the roller extends through the cavity opening, and a second position for walking, in which the roller is fully recessed within the cavity.

21. (original) The shoe of claim 20 wherein the cup encloses the roller within the cavity in said second position for walking.

22. (original) The shoe of claim 1 wherein the roller is elongated.

23. (original) The shoe of claim 1 wherein the roller is barrel-shaped.

24. (original) The shoe of claim 1 wherein the roller comprises a wheel.

25. (original) The shoe of claim 1 wherein the roller contains a bearing supporting the roller on the axle.

26. (original) The shoe of claim 25 wherein the bearing contains rolling elements.

27. (original) The shoe of claim 1 wherein the roller is cylindrical.

28. (original) The shoe of claim 1 wherein the roller is disposed in an arch region of the sole.

29. (original) The shoe of claim 1 wherein the roller defines a rolling surface spanning a distance of at least 2.0 inches (5 centimeters) along the sole.

30. (original) The shoe of claim 29 wherein the rolling surface spans a distance of at least about 2.5 inches (6.3 millimeters) along the sole.

31. (original) The shoe of claim 29 wherein the rolling surface spans at least about 15 percent of an overall length of the shoe.

32. (original) The shoe of claim 31 wherein the rolling surface spans at least about 20 percent of an overall length of the shoe.

33. (original) The shoe of claim 32 wherein the rolling surface spans at least about 25 percent of an overall length of the shoe.

34. (cancelled)

35. (original) The shoe of claim 1 wherein the axle defines a canted kingpin axis about which the axle rotates to induce yaw with respect to a rolling direction.

36. (original) The shoe of claim 35 wherein the axle is secured to the sole through a compliant mount that resiliently deforms as the axle is rotated about its kingpin axis.

37. (original) The shoe of claim 35 wherein the axle carries two rollers, one disposed on either side of the kingpin axis.

38. (original) The shoe of claim 37 wherein the rollers are cylindrical.

39. (original) The shoe of claim 37 wherein the rollers are mounted for rotation about the axle through separate bearings containing rolling elements.

40. (original) The shoe of claim 37 wherein a fore-aft distance between midplanes of the rollers is about 3.0 inches (76 millimeters).

41. (original) The shoe of claim 40 wherein the fore-aft distance between midplanes is about 30 percent of an overall length of the sole.

42. (original) The shoe of claim 35 wherein the kingpin axis is defined in part by a pin of the axle disposed for rotation within a socket of axle mounting structure secured to the sole.

43. (original) The shoe of claim 35 wherein the axle is disposed in an arch region of the sole, between the forward region and an exposed heel region of the sole.

44. (original) The shoe of claim 35 wherein the axle is selectively removable from the sole for walking.

45. (original) The shoe of claim 35 wherein the shoe further comprises a roller mounted to rotate about a fixed axle laterally spaced from the axle with the canted kingpin axis.

46. (original) The shoe of claim 45 wherein the fixed axle is disposed on a side of the kingpin axis facing an inner side of the shoe.

47. (original) The shoe of claim 35 comprising at least two rollers, each mounted for rotation about corresponding, independent axles, each axle defining a canted kingpin axis about which the axle rotates to induce yaw with respect to a rolling direction, the axles spaced apart laterally across the sole.

48. (original) The shoe of claim 47 wherein each axle carries two rollers, one disposed on either side of its kingpin axis.

49. (original) The shoe of claim 47 wherein the two rollers together define a wheelbase of about 20 percent of an overall length of the shoe.

50. (original) The shoe of claim 47 wherein each kingpin axis extends upward toward an adjacent side of the shoe.

51. (original) The shoe of claim 35 wherein both axles and their associated rollers are completely disposed within a shoe width defined by the exposed forward region of the sole.

52. (original) The shoe of claim 1 wherein the roller defines at least two support surface contact points separated by at least 1.5 inches (38 millimeters).

53. (original) The shoe of claim 52 wherein the contact points are defined on a single rolling member.

54. (original) The shoe of claim 53 wherein the rolling member is shaped to engage a flat, horizontal supporting surface at one of the contact points in a first roller tilt direction, and the other of the contact points in a second roller tilt direction.

55. (original) The shoe of claim 53 wherein the rolling member is shaped to engage a flat, horizontal supporting surface at both contact points simultaneously.

56. (original) The shoe of claim 52 wherein the contact points are defined on at least two independently rotatable rolling members.

57-66. (cancelled)

67. (previously presented) A shoe defining a normal walking direction and comprising a sole defining a forward region positioned beneath toes and at least part of a ball of a foot received within the shoe and having a lower surface exposed across the forward region to engage a supporting surface for walking thereon; and

a steerable truck assembly secured to the sole through a compliant mount and disposed rearward of the forward region, a roller mounted to the truck assembly to rotate about an axle defining a primary axis of rotation extending at an angle of between about zero and 45 degrees to the walking direction, as viewed from above the shoe, for rolling sideways along a support surface, arranged so as to enable personal locomotion.

68. (previously presented) The shoe of claim 67 wherein the sole is flexible for bending during walking.

69. (previously presented) The shoe of claim 67 wherein the axle is mountable to the sole in a plurality of selectable axis orientations.

70. (previously presented) The shoe of claim 69 wherein, in one of the axis orientations, the axle defines an alternate axis of rotation extending substantially perpendicular to the walking direction.

71. (previously presented) The shoe of claim 67 wherein the shoe comprises two such rollers.

72. (previously presented) The shoe of claim 71 wherein the two rollers are spaced apart laterally across the sole.

73. (previously presented) The shoe of claim 72 wherein centers of the two rollers have a lateral spacing of about 20 percent of an overall length of the sole.

74. (previously presented) The shoe of claim 71 wherein the two rollers are spaced apart along the walking direction.

75. (previously presented) The shoe of claim 74 wherein midplanes of the two rollers are spaced apart along the walking direction by a distance of about 30 percent of an overall length of the sole.

76. (previously presented) The shoe of claim 74 further comprising a grinding surface disposed between the rollers and defining a laterally extending channel for receiving a rail.

77. (previously presented) The shoe of claim 76 wherein the grinding surface comprises a circumferential surface of a rolling member.

78. (previously presented) The shoe of claim 76 wherein the grinding surface is rigidly secured to the sole of the shoe.

79. (previously presented) The shoe of claim 67 wherein the sole defines a cavity having an opening at the lower surface of the sole, the roller being partially disposed within the cavity and extending through the cavity opening.

80. (previously presented) The shoe of claim 67 wherein the roller is elongated.

81. (previously presented) The shoe of claim 67 wherein the roller is barrel-shaped.

82. (previously presented) The shoe of claim 67 wherein the roller comprises a wheel.

83. (previously presented) The shoe of claim 67 wherein the roller contains a bearing supporting the roller on the axle.

84. (previously presented) The shoe of claim 83 wherein the bearing contains rolling elements.

85. (previously presented) The shoe of claim 67 wherein the roller is cylindrical.

86. (previously presented) The shoe of claim 67 wherein the axle defines a canted kingpin axis about which the axle rotates to induce yaw with respect to a rolling direction.

87. (previously presented) The shoe of claim 86 wherein the axle is secured to the sole through a compliant mount that resiliently deforms as the axle is rotated about its kingpin axis.

88. (previously presented) The shoe of claim 86 wherein the axle carries two rollers, one disposed on either side of the kingpin axis.

89. (previously presented) The shoe of claim 88 wherein the rollers are mounted for rotation about the axle through separate bearings containing rolling elements.

90. (previously presented) The shoe of claim 88 wherein a fore-aft distance between midplanes of the rollers is about 3.0 inches (76 millimeters).

91. (previously presented) The shoe of claim 90 wherein the fore-aft distance between midplanes is about 30 percent of an overall length of the sole.

92. (previously presented) The shoe of claim 86 wherein the kingpin axis is defined in part by a pin of the axle disposed for rotation within a socket of axle mounting structure secured to the sole.

93. (previously presented) The shoe of claim 86 wherein the axle is disposed in an arch region of the sole, between the forward region and an exposed heel region of the sole.

94. (previously presented) The shoe of claim 86 wherein the axle is selectively removable from the sole for walking.

95. (previously presented) The shoe of claim 86 wherein the shoe further comprises a roller mounted to rotate about a fixed axle laterally spaced from the axle with the canted kingpin axis.

96. (previously presented) The shoe of claim 95 wherein the fixed axle is disposed on a side of the kingpin axis facing an inner side of the shoe.

97. (previously presented) The shoe of claim 86 comprising at least two rollers, each mounted for rotation about corresponding, independent axles, each axle defining a canted kingpin axis about which the axle rotates to induce yaw with respect to a rolling direction, the axles spaced apart laterally across the sole.

98. (previously presented) The shoe of claim 97 wherein each axle carries two rollers, one disposed on either side of its kingpin axis.

99. (previously presented) The shoe of claim 97 wherein the two rollers together define a wheelbase of about 20 percent of an overall length of the shoe.

100. (previously presented) The shoe of claim 97 wherein each kingpin axis extends upward toward an adjacent side of the shoe.

101. (previously presented) The shoe of claim 67 wherein the roller defines at least two support surface contact points separated by at least 1.5 inches (38 millimeters).

102. (previously presented) The shoe of claim 101 wherein the contact points are defined on a single rolling member.

103. (previously presented) The shoe of claim 102 wherein the rolling member is shaped to engage a flat, horizontal supporting surface at one of the contact points in a first roller tilt direction, and the other of the contact points in a second roller tilt direction.

104. (previously presented) The shoe of claim 102 wherein the rolling member is shaped to engage a flat, horizontal supporting surface at both contact points simultaneously.

105. (previously presented) The shoe of claim 101 wherein the contact points are defined on at least two independently rotatable rolling members.

106. (new) A shoe defining a normal walking direction and comprising a sole defining a heel region and a forward region, the forward region positioned beneath toes and at least part of a ball of a foot received within the shoe and having a lower surface exposed across the forward region to engage a supporting surface for walking thereon; and a roller secured to the sole, the roller disposed rearward of the forward region and extending below a lowermost extent of the heel region, the roller mounted to rotate about an axle defining a primary axis of rotation extending at an angle of between about zero and 45 degrees to the walking direction, as viewed from above the shoe, the axle defining a canted kingpin axis about which the axle rotates to induce yaw with respect to a rolling direction, the axle secured to the sole through a compliant mount that resiliently deforms as the axle is rotated about its kingpin axis, the roller positioned so as to enable rolling sideways along a support surface as a mode of personal locomotion.

107. (new) The shoe of claim 106 wherein the roller is removable.

108. (new) The shoe of claim 106 wherein the roller is retractable.

109. (new) The shoe of claim 106 wherein the sole is flexible for bending during walking.

110. (new) The shoe of claim 106 wherein the roller forms a lowermost portion of the shoe.

111. (new) The shoe of claim 106 wherein the axle is mountable to the sole in a plurality of selectable axis orientations.

112. (new) The shoe of claim 106 wherein the shoe comprises two such rollers.
113. (new) The shoe of claim 112 wherein the two rollers are spaced apart laterally across the sole.
114. (new) The shoe of claim 113 wherein centers of the two rollers have a lateral spacing of about 20 percent of an overall length of the sole.
115. (new) The shoe of claim 112 wherein midplanes of the two rollers are spaced apart along the walking direction by a distance of about 30 percent of an overall length of the sole.
116. (new) The shoe of claim 106 wherein the sole defines a cavity having an opening at the lower surface of the sole, the roller being partially disposed within the cavity and extending through the cavity opening.
117. (new) The shoe of claim 106 wherein the roller is elongated.
118. (new) The shoe of claim 106 wherein the roller is barrel-shaped.
119. (new) The shoe of claim 106 wherein the roller comprises a wheel.
120. (new) The shoe of claim 106 wherein the roller contains a bearing supporting the roller on the axle.
121. (new) The shoe of claim 106 wherein the roller is cylindrical.

122. (new) The shoe of claim 106 wherein the roller is disposed in an arch region of the sole.

123. (new) The shoe of claim 106 wherein the axle is selectively removable from the sole for walking.

124. (new) The shoe of claim 106 wherein the shoe further comprises a roller mounted to rotate about a fixed axle laterally spaced from the axle with the canted kingpin axis.

125. (new) The shoe of claim 106 comprising at least two rollers, each mounted for rotation about corresponding, independent axles, each axle defining a canted kingpin axis about which the axle rotates to induce yaw with respect to a rolling direction, the axles spaced apart laterally across the sole.

126. (new) The shoe of claim 106 wherein the roller defines a rolling surface spanning a distance of at least 2.0 inches (5 centimeters) along the sole.

127. (new) The shoe of claim 126 wherein the rolling surface spans a distance of at least about 2.5 inches (6.3 millimeters) along the sole.

128. (new) The shoe of claim 126 wherein the rolling surface spans at least about 15 percent of an overall length of the shoe.

129. (new) The shoe of claim 106 wherein the axle carries two rollers, one disposed on either side of the kingpin axis.

130. (new) The shoe of claim 129 wherein a fore-aft distance between midplanes of the rollers is about 3.0 inches (76 millimeters).

131. (new) The shoe of claim 106 comprising at least two rollers, each mounted for rotation about corresponding, independent axles, each axle defining a canted kingpin axis about which the axle rotates to induce yaw with respect to a rolling direction, the axles spaced apart laterally across the sole.

132. (new) The shoe of claim 131 wherein the two rollers together define a wheelbase of about 20 percent of an overall length of the shoe.

133. (new) The shoe of claim 106 wherein both axles and their associated rollers are completely disposed within a shoe width defined by the exposed forward region of the sole.

134. (new) The shoe of claim 106 wherein the roller defines at least two support surface contact points separated by at least 1.5 inches (38 millimeters).

135. (new) The shoe of claim 29 wherein the roller comprises multiple wheels mounted for rotation about a single axis.

136. (new) The shoe of claim 1 wherein the roller, axle and compliant mount are secured to the sole as a removable assembly.

137. (new) The shoe of claim 136 wherein the assembly is configured to be removed from the shoe sole in a manual, tool-free operation.

138. (new) The shoe of claim 136 wherein the assembly is secured to the shoe sole by a removable pin extending through a hole defined in a mounting boss of the assembly.

139. (new) The shoe of claim 67 wherein the truck assembly is secured to the sole as a removable assembly.

140. (new) The shoe of claim 139 wherein the removable assembly is configured to be removed from the shoe sole in a manual, tool-free operation.

141. (new) The shoe of claim 139 wherein the removable assembly is secured to the shoe sole by a removable pin extending through a hole defined in a mounting boss of the assembly.

142. (new) The shoe of claim 106 wherein the roller, axle and compliant mount are secured to the sole as a removable assembly.

143. (new) The shoe of claim 142 wherein the assembly is configured to be removed from the shoe sole in a manual, tool-free operation.

144. (new) The shoe of claim 142 wherein the assembly is secured to the shoe sole by a removable pin extending through a hole defined in a mounting boss of the assembly.